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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/712,500	11/14/2000	Karleen M. Cirulli	81154DMW	9121

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Patent Legal Staff  
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343 State Street  
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EXAMINER
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REKSTAD, ERICK J

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 12/22/2003

4

Please find below and/or attached an Office communication concerning this application or proceeding.

TS

## Office Action Summary

Application No.

09/712,500

Applicant(s)

CIRULLI ET AL.

Examiner

Erick Rekstad

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5, 6, 7, 9, 10, 15, 19, 20, 24, 25, 28, 29, 30, 31, 32 and 33 are rejected under 35 U.S.C. 103(a) as being anticipated by US Patent 5,646,750 to Collier.

[claims 1,15, and 24]

As shown in Figures 7A, Collier teaches a method and system for converting a sequence of electronically captured images into a sequence of modified images providing the appearance of images captured by a film reproduction system, the film reproduction system being of the type that includes a motion picture negative film printed onto a motion picture print film (Col 4 Lines 27-38) that is displayed, or a reversal motion picture system in which a reversal film is displayed, said method comprising the steps of:

a) electronically capturing a sequence of images, resulting in electronically captured image data (Col 7 Lines 20-63, Col 3 Lines 16-25);

c) (Optionally) transforming the neutral-corrected electronically captured images with a linear function that emulates a film exposure of the film reproduction system, resulting in exposure-corrected electronically captured images (Col 11 Lines 28-64);

d) transforming the exposure-corrected electronically captured images with a non-linear function that renders the exposure-corrected electronically captured images with a tone scale of the film reproduction system, resulting in tonescale-corrected electronically captured images (Col 12 Lines 6-12); and

e) transforming the tonescale-corrected electronically captured images with a linear function that emulates a film color look provided by the film reproduction system, resulting in modified images that provide the appearance of an image captured with the film reproduction system, whereby the transformation steps are referenced to scanned film densities of a film used in the film reproduction system (Col 12 Lines 13-67, Col 13 Lines 1-23).

Collier does not teach step b) transforming the electronically captured image data into linearized exposure data, resulting in neutral-corrected electronically captured images as part of the second embodiment. Collier does teach the step of linearizing the captured image as part of the first embodiment where the captured image is linearized before being stored to a storage medium (Col 7 Lines 47-67, Col 8 Lines 1-36, Fig 6 and 8). It would be obvious to one skilled in the art at the time of the invention to combine the camera of Collier with the video editing system of Collier in order to provide a combined system to capture and edit a video stream.

[claims 5, 6, 19, 28, and 32]

Collier teaches the displaying of the modified images with a CRT display (Col 14 Lines 14 and 15). It would be obvious to one skilled in the art at the time of the

invention to use the CRT display of Collier with the video editing system of Collier in order to view the edited video stream.

[claims 7 ,9, 10, 20, 29, 30 and 33]

Collier teaches the method of claims 1 and 15 wherein the modified images are color-balanced before subsequent utilization by balancing a reference neutral to a predetermined scanner density value, resulting in modified images and then displaying the modified images on a display. The display is an electro-optical display including at least one of a digital projector, a television display, a video projector, a liquid crystal display or a laser projector (Col 14 Lines 9-64, Fig 7B). It would be obvious to one skilled in the art at the time of the invention to combine the editing system of Collier with the display of Collier in order to provide a video stream, with a film like look, formatted for a specific display.

[claim 25]

Collier teaches the use of look up tables for use in the non-linear processes (Col 10 Lines 32-33, Col 13 Lines 24-39). Collier also teaches the use of matrices for use in the linear processes (Col 11 and Col 12). It would be obvious to one skilled in the art at the time of the invention to use look up tables and matrices in the editing system of Collier in order to reduce the number of calculations needed to convert the data.

Claims 2, 16, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collier in view of US Patent 6,122,006 to Bogdanowicz et al.

[claims 2, 16, and 26]

Collier teaches the method and system of transforming the electronically captured image data into linearized exposure data. Collier does not specifically teach reversing electronic camera non-linearities applied to the electronically captured image data. Bogdanowicz teaches the use of a LUT to compensate for the logarithmic brightness perceived by the human eye and produced by a display (Col 4 Lines 1-12). It would be obvious to one skilled in the art at the time of the invention to use a LUT to compensate for all non-linearities in order to provide linearized exposure data.

Claims 3, 17, 21, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collier.

[claims 3, 17, and 21]

Collier teaches two different embodiments. One embodiment performs the conversion to "film-like" compression inside the camera. The second embodiment performs the "film-like" compression in a post-production editing system (Col 3 Lines 5-25). Collier does not teach performing some of the steps within the camera and the rest of the steps in the post-production editing system. It would be obvious to one skilled in the art at the time of the invention to perform the linearization of the exposure data within the camera and perform the rest of the conversion in a post-production editing system because the non-linearities caused by the camera would be well known to the camera but the desired film to emulate may not be known at the time of recording.

[claim 23]

Collier teaches the displaying of the modified images with a CRT display (Col 14 Lines 14 and 15). It would be obvious to one skilled in the art at the time of the invention

to use the CRT display of Collier with the video editing system of Collier in order to view the edited video stream.

Claims 4, 8, 11-14, 18, 22, 27 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collier in view of US Patent 5,457,491 to Mowry.

[claims 4 , 8, 18, 22, 27, and 31]

Collier teaches the step of displaying the converted video on a display. Collier does not teach storing the converted video onto film. Mowry teaches the storing of converted video onto film (Col 2 Lines 53-67, Col 13 Lines 39-46, Fig 5). It would be obvious to one skilled in the art at the time of the invention to combine the converter of Collier with the storage device of Mowry in order to provide a means of using the benefits of cheap recording with an electronic camera but provide a standard motion picture film for use in theaters.

[claim 11]

Collier teaches the use of a general equation to produce the LUT used to create neutrally-corrected electronic camera exposures (Col 4 and 5). Collier teaches the making of LUTs (Col 5 and 6). Collier also teaches the use of the LUTs to adjust each color signal (Col 10 Lines 21-37). Collier further teaches the use of film stock data in order to create a matrix for adjusting color. Collier does not teach the method of using a color chart and film stock data to create the LUTs used in the step to create neutrally-corrected electronic camera exposures. Mowry teaches the method of capturing an image of a color chart with an electric camera and comparing that with stored results from film stock in order to generate a LUT (Col 9 Lines 17-61). It would be obvious to

one skilled in the art to replace the method of creating the LUT of Collier with the method of Mowry in order to replace the general equation used by Collier with the more accurate film stock data specific method of Mowry.

[claim 12]

Collier teaches the method of transforming the neutral-corrected electronically captured images with a linear function that emulates a film exposure of the film reproduction system is preformed with a matrix that is determined by regressing the neutrally-corrected electronic camera exposures against the film exposures, thereby producing exposure-corrected electronic camera exposures (Col 10 Lines 54-67, Col 11 Lines 1-15).

[claim 13]

Collier teaches the method of transforming the exposure-corrected electronically captured images with a non-linear function that renders the exposure-corrected electronically captured images with a tone scale of the film reproduction system is performed with a look up table that is determined by mapping the exposure-corrected electronic camera exposures to channel-independent printing densities corresponding to the scanned film densities, thereby resulting in tonescale-corrected electronic camera values (Col 11 Lines 28-67, Col 13 Lines 24-34).

[claim 14]

Collier teaches the method of transforming the tonescale-corrected electronically captured images with a linear function that emulates a film color look provided by the film reproduction system is preformed with a matrix that is determined by regressing the

tonescale-corrected electronic camera values against the scanned film densities (Col 14 Lines 9-40).

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent 5,351,141 to Tsuji et al.

US Patent 4,771,342 to Beesley.


US Patent 5,319,465 to Squyres et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erick Rekstad whose telephone number is 703-305-5543. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 703-305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

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